Amendments to the Specification:

Please replace paragraph [0016] with the following amended paragraph:

[0016] FIG. [[6]] 6a and FIG. 6b provide ~~provides~~ a summary of experimental results regarding DNA sequence specificity.

Please replace paragraph [0141] with the following amended paragraph:

[0141] FIG [[6]] 6a and FIG. 6b provide ~~provides~~ a summary of experimental results regarding DNA sequence specificity. For any detection method, it is necessary to minimize the number of false positives. DNA detection relies upon the inherent complementary base pairing properties of the molecule. To optimize detection sensitivity, therefore, it is important to minimize the number of DNA bridges formed in the presence of base-pair mismatches between the probes and target molecule. LCR is sensitive to mismatches several bases away from the ligation site. Mismatches prevent ligation form occurring to form the biotinylated DNA bridges. This is represented on the sequence specificity graph, where the number of bridges formed with a mismatched target is dramatically lower than a fully complementary target.